

REMARKS

By the foregoing amendments several corrections have been made in the Substitute Specification and claim 1 has been amended. Thus, claims 1-16 are in the application.

Claims 1-16 are rejected in the outstanding Office Action under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement as set forth on page 5 of the Office Action. More particularly, it is stated in the rejection that claim 1 recites “via at least one of an adhesive resin layer and another layer set as c (c1, c2,...)”. It is stated in the rejection that while the specification provides support for the use of an adhesive resin layer, it does not provide support for “at least one” adhesive resin layer. Similarly, it is stated that while the specification provides support for an “other layer” between layers (a) and (b), it does not provide support for “at least one” other layer. It is stated in the rejection that the specification provides support for multiple (c) layers in the exemplary structures, but in these examples at most only one (c) layer is between layers (a) and (b). It is further stated in the Office Action the specification does not appear to support the use of an adhesive layer in conjunction with an “other layer” as the layers between layers (a) and (b). In addition, in the rejection it was stated that the specification does not appear to support the phrase “at least” with respect to the layer composition selected from the group consisting of “b/a/b, b/a/c, etc.”

Responsive to this rejection, by the above amendments claim 1 has been amended to omit the expression “at least one of” before the alternative expression of an adhesive resin layer or another layer. Support for the amended language in claim 1 is found on page 15, line 11 through page 16, line 25. The expression “at least” has also been deleted from the reference in

claim 1 to a layer composition selected from a group consisting of b/a/b, b/a/c, etc. Support for the amended language concerning the laminated article including a layer composition selected from the group consisting of b/a/b, b/a/c,...etc. is found on page 16, line 26 through page 17, line 10. Thus, claims 1-16 as amended are believed to be proper under 35 U.S.C. § 112, first paragraph.

Claims 1-16 were further rejected in the Office Action under 35 U.S.C. § 112, second paragraph, as being indefinite because the scope of the claim is confusing due to the inclusion of “at least” in the limitation “consisting of at least b/a/b, b/a/c,...”. The expression “at least” was said to conflict with the exclusive “consisting of” language. Responsive to this rejection, as noted above, by the amendments the objectionable language “at least” in claim 1 has been deleted. In view of these changes, it is respectfully submitted that claims 1-16 are proper under 35 U.S.C. § 112, second paragraph.

Claims 1, 2, 4-6 and 11-16 were rejected in the outstanding Office Action under 35 U.S.C. § 103(a) as being unpatentable over Miharuru, et al. (WO 96/18681) in view of Ninomiya, et al. (US 6,184,288) and Saxton (US 5,032,632) as stated on pages 2-4 of the Office Action.

Claims 3 and 7-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the aforementioned combination of references as applied to claims 1, 2, 4-6 and 11, and further in view of Tachibana, et al. (US 6,169,161) as stated on pages 4 and 5 of the Office Action.

These rejections are hereby traversed and reconsideration thereof is respectfully requested in view of the above amendments to the claims and the remarks set forth below.

In the present invention, the blend of polyamide resin (B) and EVOH (A) are melt-kneaded and both resins are reacted moderately. As a result, PA resin (B) can keep the crystalline construction of EVOH (A) and specific effects of the present invention (such as excellent in appearance, delamination resistance, gas barrier property, excellent in long-run processability, performance of preventing odor and coloring and the like) can be obtained. In order to react both PA resin (B) and EVOH (A) moderately, it is necessary to decompose EVOH (A) to be easy to react with PA resin (B). However, when the said decomposition is carried too much, the above reaction tends to be carried out too much and the said excellent effects cannot be obtained. Therefore it is important to adjust the reaction by adding compounding ingredients such as sodium salt (M1), bivalent metal salt (M2), phosphorous compound and hindered phenol antioxidant as described blending ratio and quantity of the present invention, as recited in the claims as amended, to decompose EVOH moderately. As a result, the reaction can be carried out moderately and the above specific effects are obtained. The cited references do not render Applicant's claimed laminated article obvious, 35 U.S.C. § 103.

The primary reference to Miharu, et al. relied upon in the rejections discloses a thermoplastic resin composition and its use. In Miharu, et al. it is necessary to add 10-40% by weight of an ionomer. Ionomer is a hydrophilic resin. When such a large amount of ionomer is added as a compounding ingredient, the affinity of resin compound and water becomes increased and it becomes inadequate for using laminate film for retort treatment. As evidence of this fact, there is no disclosure of using laminate film for retort treatment in

Miharu, et al. Miharu, et al. also fail to teach the use of a ratio of alkaline metal salt to alkaline earth metal, and a phosphorous compound as disclosed and claimed by Applicant, as admitted in paragraph number 6 on page 2 of the Office Action.

The secondary reference to Ninomiya, et al. only discloses a copolymer of EVOH and amide-containing monomer and is silent with respect to a blend of EVOH copolymer and polyamide (PA) resin. It was stated on the outstanding Office Action that the application claims do not recite a mixture of a blend, but only require EVOH and polyamide. Responsive to this statement, by the above amendments claim 1 has been amended to positively recite that the saponified product of an ethylene-vinyl acetate copolymer (A) and the polyamide resin (B) are blended.

Furthermore, another important technical feature of the present invention is using alkaline metal salt, alkaline earth metal salt, phosphorous compound and hindered phenol antioxidant in the described blending ratio and quantity as recited in the claims as amended. According to having these compounding ingredients in adequate ratio, the specific advantageous affects such as performance of preventing odor and coloring are obtained. See the table below with respect to a comparison of the present invention and the cited references.

	resin	compounding ingredient	advantageous effect
present invention	EVOH PA	alkaline metal salt alkaline earth metal salt phosphorous compound hindered phenol antioxidant	<ul style="list-style-type: none"> •excellent in apperance after a retort treatment •delamination resistance •gas barrier property •excellent in long-run processability •<u>performance of preventing odor and coloring</u> •and the like
Miharu et al	EVOH PA <u>ionomer</u>	-	<ul style="list-style-type: none"> •transparency •gas barrier property •impact resistance •pinhole resstance •stretchability •drawability
Ninomiya et al	EVOH resin	alkaline metal salt alkaline earth metal salt phosphorous compound	<ul style="list-style-type: none"> •transparency •gas barrier property •prevent fish eye •long-run workability •continuous moldability •strechability of moldings
Saxton et al	EVOH resin	metal salt hindered phenol antioxidant	<ul style="list-style-type: none"> •improved stability toward oxidative gel formation •long-run workability

TABLE

The above table describes the specific advantageous effects, performance of preventing odor and coloring, obtained according to the present invention by blending EVOH to which is previously added the aforementioned compounding ingredients in adequate amount, and PA resin. Further, the field of the present invention concerns the blended resin compound of EVOH and PA resin which tends to remain a crystalline of PA resin. In this respect, there is no disclosure in the cited references about the problem considered and solved by the present invention. That is, there is no

disclosure or teaching in any of the cited references that specific advantageous effects of preventing odor and coloring after retort treatment are obtained by blending specific compounding ingredients in adequate amount. In view of this, it is respectfully submitted that the claims as amended are not obvious over the cited references under 35 U.S.C. § 103.

The secondary reference to Saxton, as noted in the remarks in the Amendment filed July 29, 2008, is directed to oxidation-resistant ethylene vinyl alcohol polymer compositions. Saxton describes mixing a monovalent metal salt and hindered phenolic antioxidant but the reference does not describe using a sodium salt and a bivalent metal salt together or containing a phosphorous compound as disclosed and claimed by Applicant. Furthermore, there is no description in the reference about the mixture of EVOH and polyamide resin which is presupposition of the present invention as noted above and in the claims as amended.

Tachibana, et al. relied upon in the rejection of claims 3 and 7-10 discloses a method for producing polyamides. The reference is concerned with the end-modified polyamide and contains descriptions about the materials which are enabled to blend. But there is no description in the reference about EVOH as such materials. And there is no description of the specified amount of the compounding agents which are prescribed in the present invention as recited in the claims as amended.

In view of the above amendments and remarks, it is believed that the claims as amended are now in condition for allowance. Accordingly, reconsideration and allowance thereof is requested.

Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (Case No. 512.46311X00) and please credit any excess fees to such deposit account.

Respectfully submitted,

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